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Claim Amendments

1. (currently amended) A frequency division duplex point-to-multipoint communications system that divides a frequency allocation into two bands, a downlink band that carries communications from a central station to multiple stations, and an uplink band that carries communications from multiple stations to the central station, the system comprising:

a carrier generator generating a plurality of carriers within each of said bands, each of said carriers being in a spaced relationship to the other carriers such that each said band is sub-divided into a plurality of sub-bands that are equal in number to the plurality of carriers and each of said plurality of sub-bands having a respective carrier of said plurality of carriers,

a time multiplexer dividing each of said sub-bands by time-multiplexing the sub-bands into a plurality of frames,

said time multiplexer also dividing each frame into N time-slots, and

a switching device assigning a series of time-slots that occur periodically, every N time-slots, once per frame, to form channels for communication between said central station and said multiple stations.

, wherein traffic is mapped to unidirectional channels and wherein the assignment of uplink carriers and time slots for a first station is done through control messages that are received and processed only by the first station to which the uplink traffic channels are to be assigned

2 – 5. Canceled.

6. (currently amended) A frequency division duplex point-to-multipoint communications system that divides a frequency allocation into two bands, a downlink band that carries communications from a central station to multiple stations, and an uplink band that carries communications from multiple stations to the central station, the system comprising:

a carrier generator generating a plurality of carriers within each of said bands, each of said carriers being in a spaced relationship to the other carriers such that each said band is sub-divided into a plurality of sub-bands that are equal in number to the plurality of carriers and each of said plurality of sub-bands having a respective carrier of said plurality of carriers,

a time multiplexer dividing each of said sub-bands by time-multiplexing the sub-bands into a plurality of frames,

said time multiplexer also dividing each frame into N time-slots, and

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a switching device assigning a series of time-slots that occur periodically, every N time-slots, once per frame, to form channels for communication between said central station and said multiple stations~~The system of claim 1,~~

wherein control is mapped to unidirectional channels and control channel messages are transmitted in one burst via said unidirectional channels in the downlink band to a first station, the control channel messages including assignment of uplink time slots to be used by the first station.

7 - 9. Canceled.

10. (currently amended) The system of claim 1, wherein the assignment of downlink carriers and time slots for the first station is done through control messages that are received and processed~~transmitted only by~~ the first station to which the downlink traffic channels are to be assigned.

11. (currently amended) The system of claim 1, wherein the assignment of uplink control traffic channels for the first station is done through control messages that are addressed~~transmitted only to the~~ first station to which the uplink control channels are to be assigned.

12. (currently amended) The system of claim 1, wherein the assignment of downlink control channels for the first station is done through control messages that are addressed~~transmitted only to the~~ first station to which the downlink control channels are to be assigned.

13. Canceled.

14. (previously amended) The system of claim 1, wherein each station may have one or more traffic channels assigned with different protocols or protocol modes at one or more layers of its protocol stack.

15. (previously amended) The system of claim 1, wherein a traffic channel is assigned resources only in the direction that there is data to be transmitted.

16. (previously amended) The system of claim 15, wherein the traffic channel is assigned resources only when there is data to be transmitted.

17. (original) The system of claim 16, wherein an uplink slow associated control channel is assigned along with an uplink traffic channel.

18. (original) The system of claim 17, wherein an uplink periodic reserved control channel is assigned to provide the same function as the uplink slow associated control channel during periods when there is no uplink traffic channel assigned.

19. (original) The system of claim 16, wherein a downlink slow associated control channel is assigned along with a downlink traffic channel.

20. (original) The system of claim 19, wherein a downlink periodic reserved control channel is assigned to provide the same function as the downlink slow associated control channel during periods when there is no downlink traffic channel assigned.

21. (original) The system of claim 1, further comprising a fast associated control channel that has a higher priority and may pre-empt traffic on the traffic channel.

22. (original) The system of claim 21, wherein the fast associated control channel message is transmitted over one burst.

23. (original) The system of claim 21, wherein the fast associated control channel message is transmitted over multiple bursts.

24. (original) The system of claim 1, wherein continuity of periodic control channels across speech talkspurt and silence periods for conversational voice also carry channel quality feedback information.

25. (original) The system of claim 24, wherein said periodic control channels further carry signal measurement reports.

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26. (original) The system of claim 25, wherein said periodic control channels further carry noise information.

27. (original) The system of claim 1, wherein uplink and downlink bands are of unequal size.

28. (previously amended) The system of claim 1, wherein a number of carriers in the uplink band is different than a number of carriers in the downlink band.

29. Canceled.

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